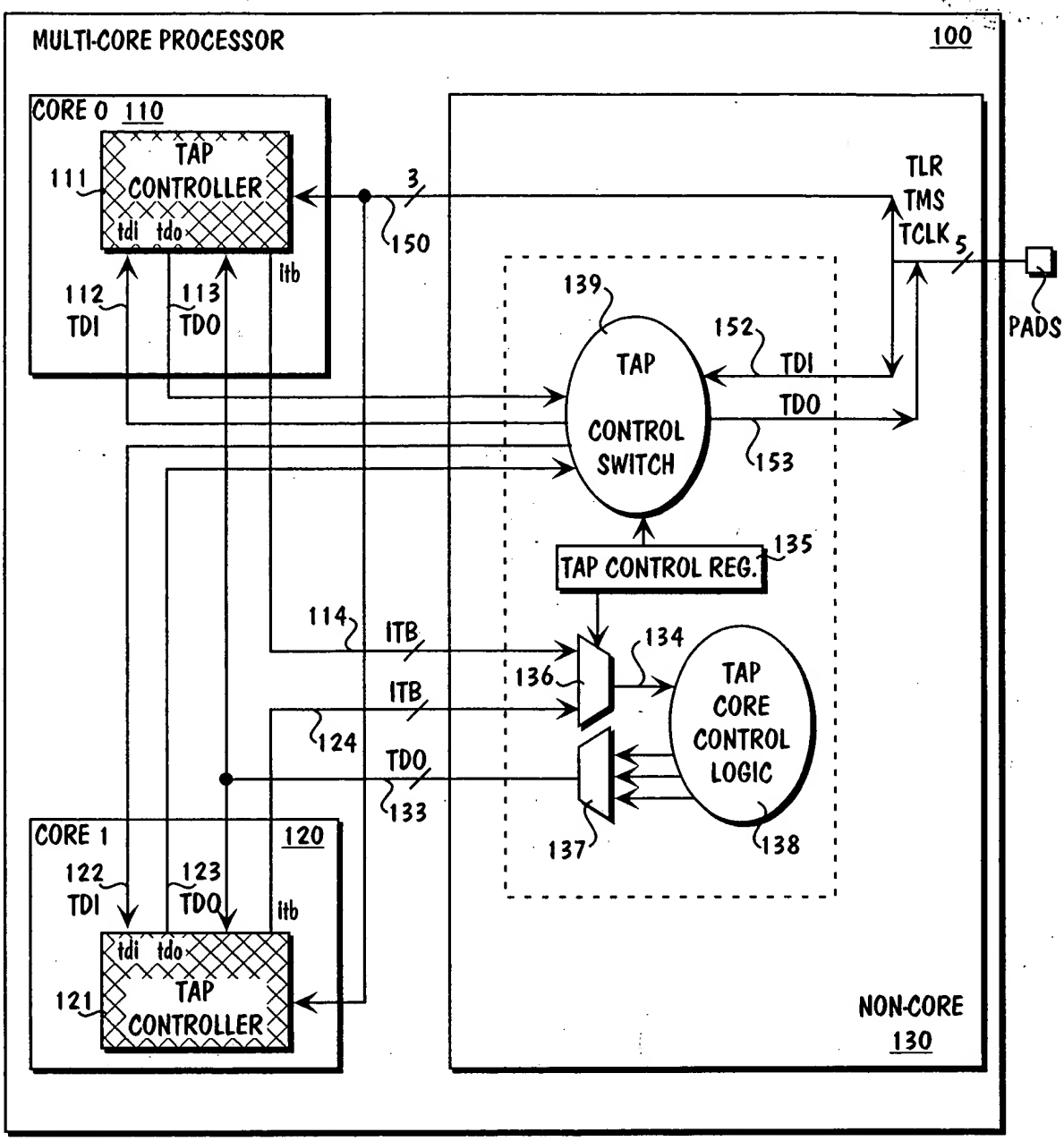

MULTI-CORE PROCESSOR
100
CORE 0 110
TAP CONTROLLER
111
tdi tdo
itb
112 TDI
113 TDO
3
150
TLR
TMS
TCLK
5
PADS
139
TAP CONTROL SWITCH
152 TDI
TDO
153
TAP CONTROL REG.
135
114 ITB
134
136
TAP CORE CONTROL LOGIC
ITB
124
TDO
133
137
138
CORE 1
120
122 TDI
123 TDO
itb
tdi tdo
TAP CONTROLLER
121
NON-CORE
130

FIG. 1

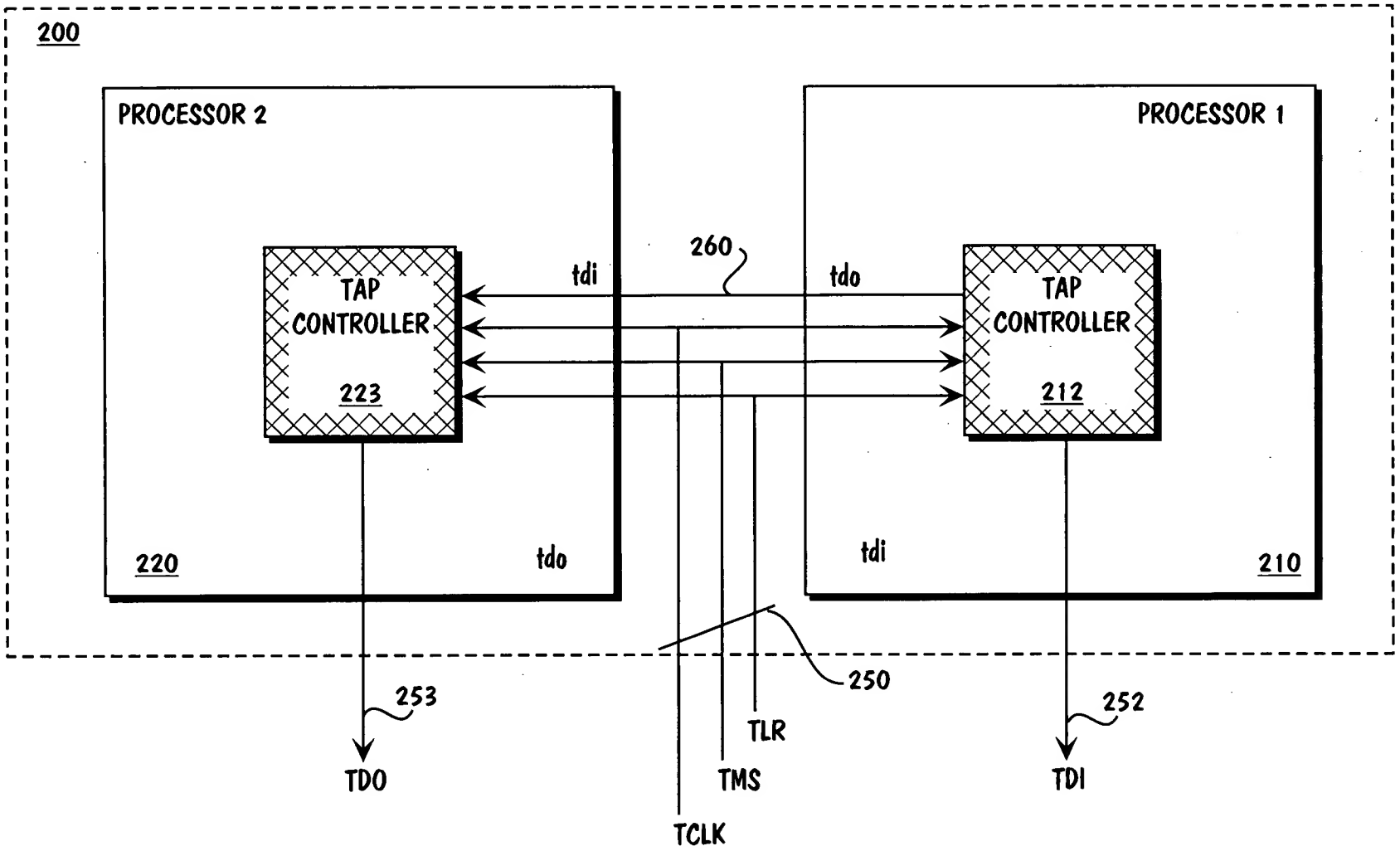

200
PROCESSOR 2
PROCESSOR 1
TAP CONTROLLER
223
TAP CONTROLLER
212
260
tdi
tdo
tdo
tdi
220
210
253
250
252
TDO
TLR
TMS
TDI
TCLK

FIG. 2

FIG. 3a

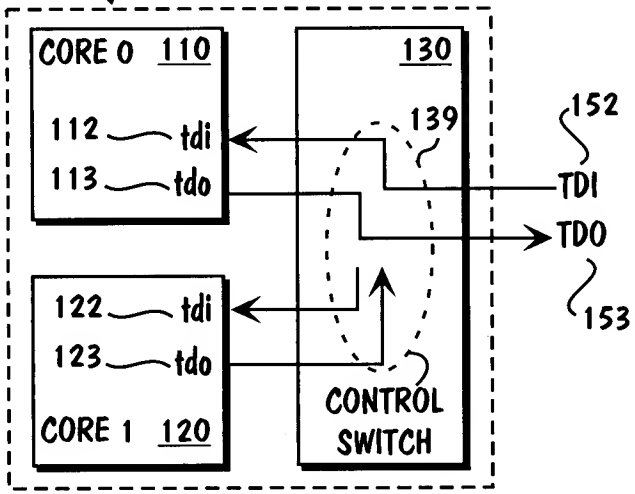
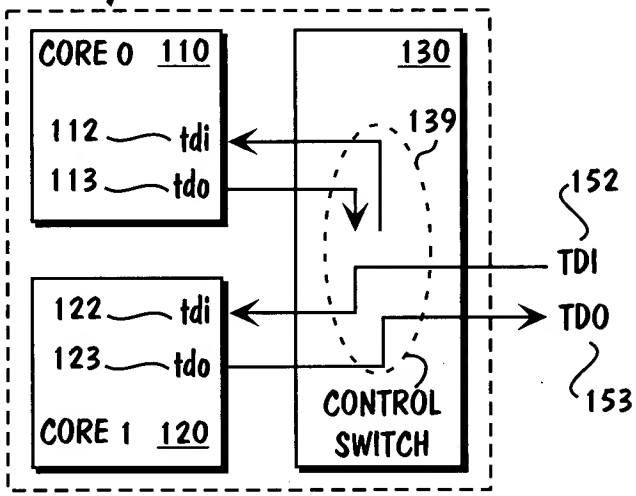


FIG. 3b



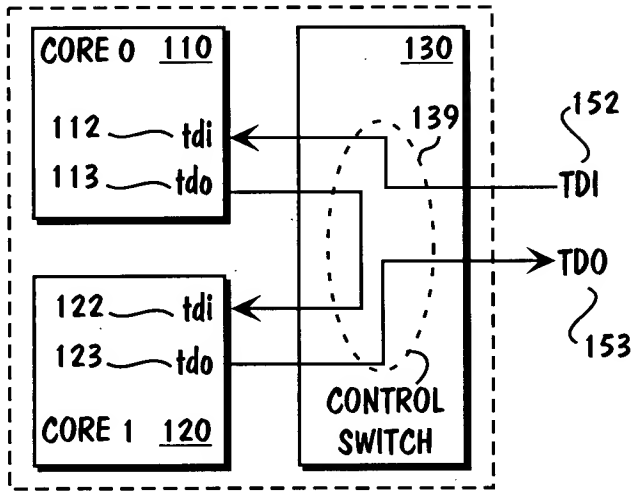


FIG. 3c

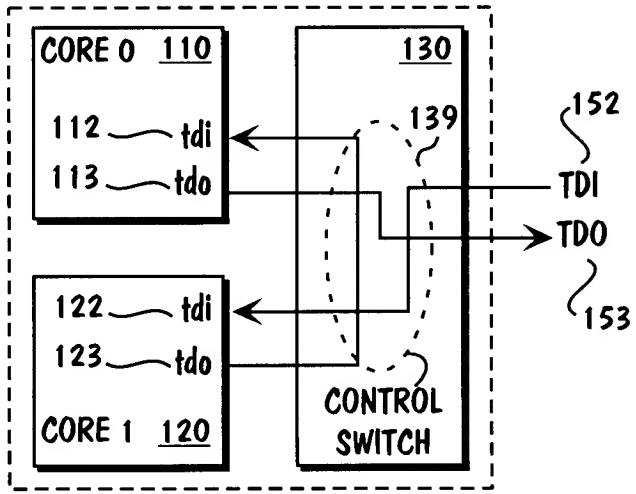


FIG. 3d

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FIG. 4a

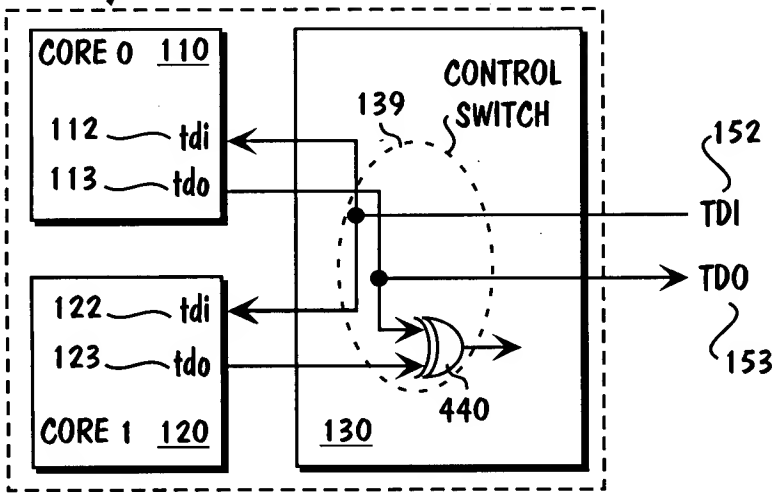


FIG. 4b

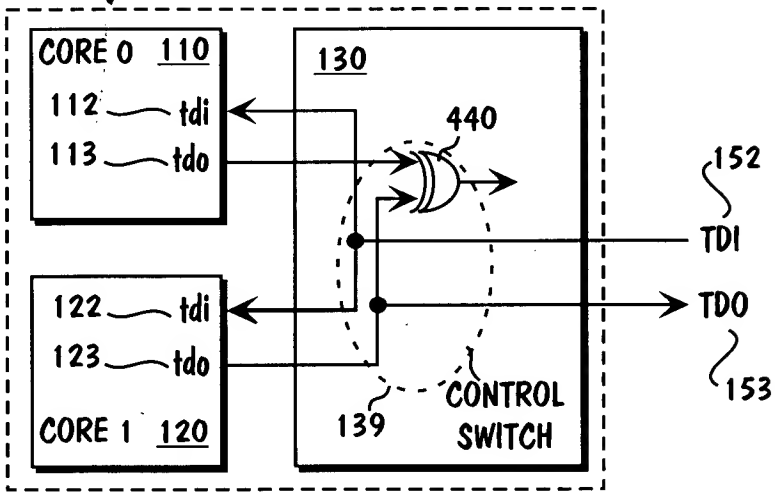


FIG. 4c

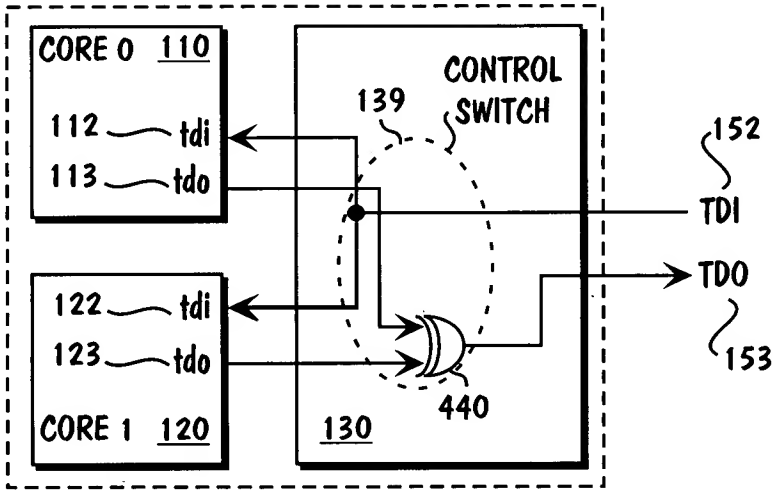
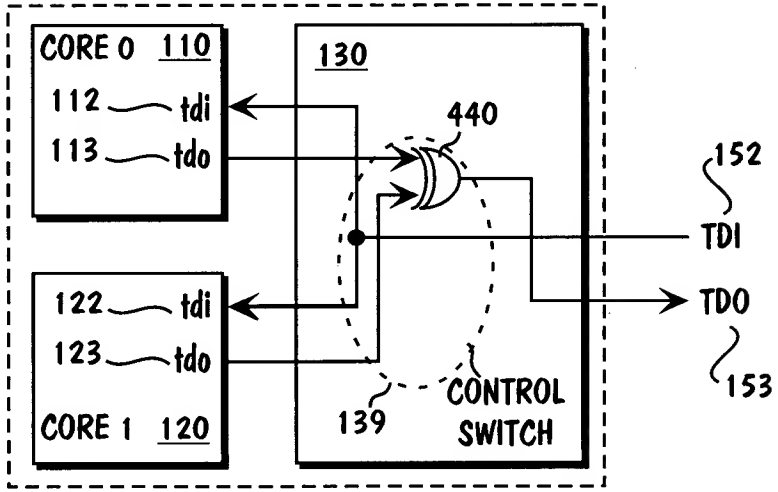


FIG. 4d



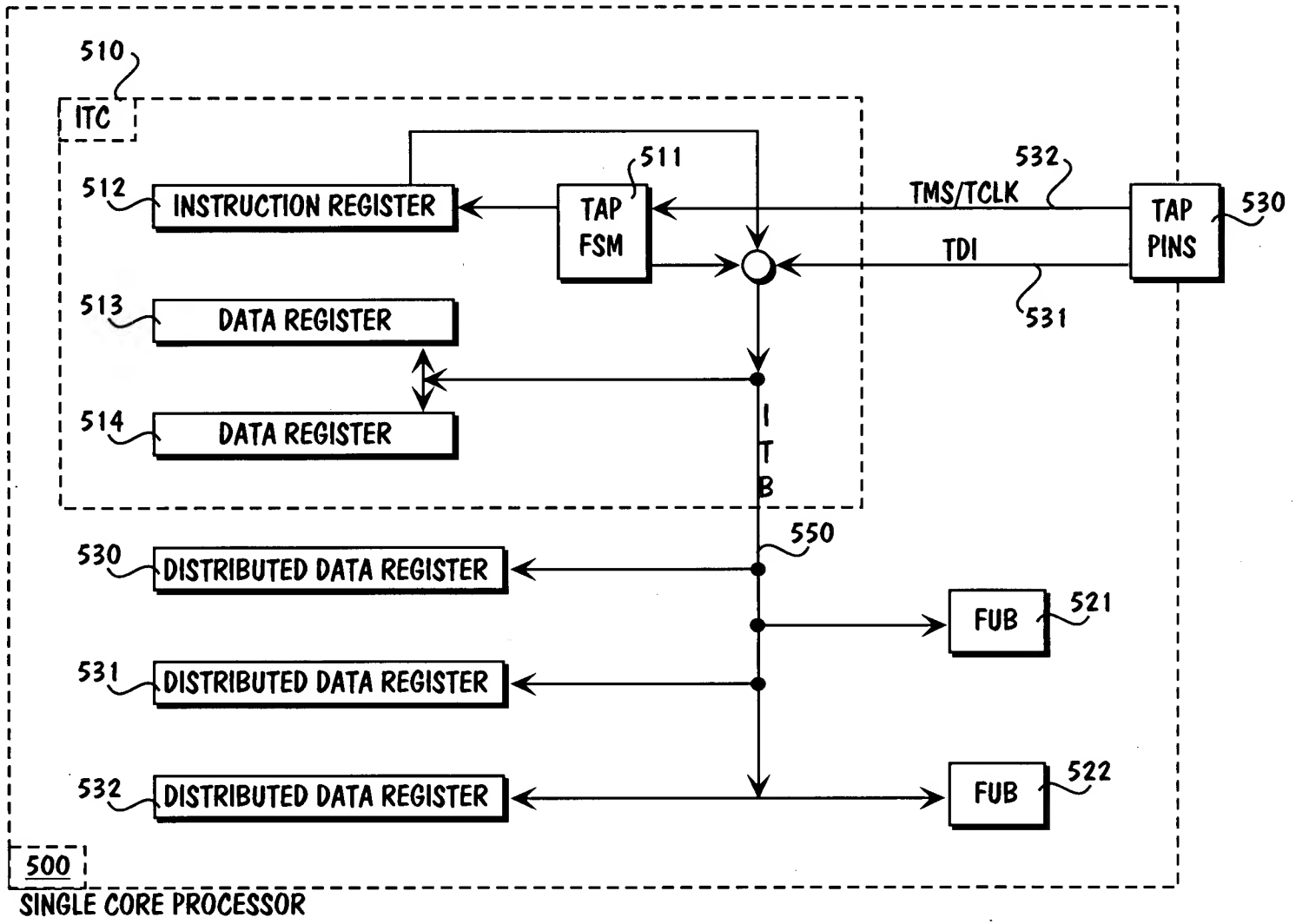

510
ITC
512
INSTRUCTION REGISTER
511
TAP
FSM
532
TMS/TCLK
TDI
531
TAP
PINS
530
513
DATA REGISTER
514
DATA REGISTER
ITB
550
530
DISTRIBUTED DATA REGISTER
FUB
521
531
DISTRIBUTED DATA REGISTER
532
DISTRIBUTED DATA REGISTER
FUB
522
500
SINGLE CORE PROCESSOR

FIG. 5

INTEGRATED TEST BUS

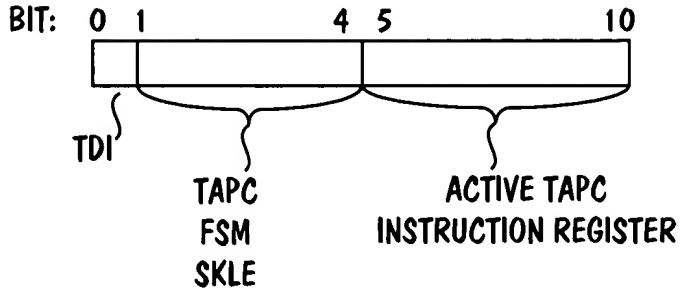


FIG. 6

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TAP CORE CONFIGURATION REGISTER

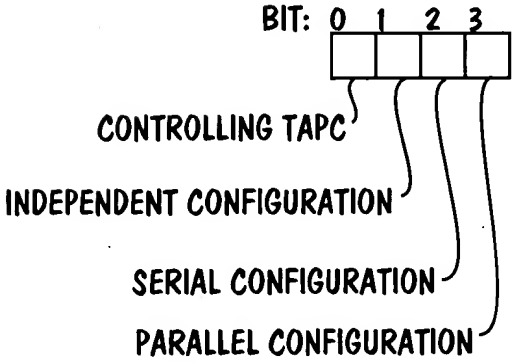

FIG. 7

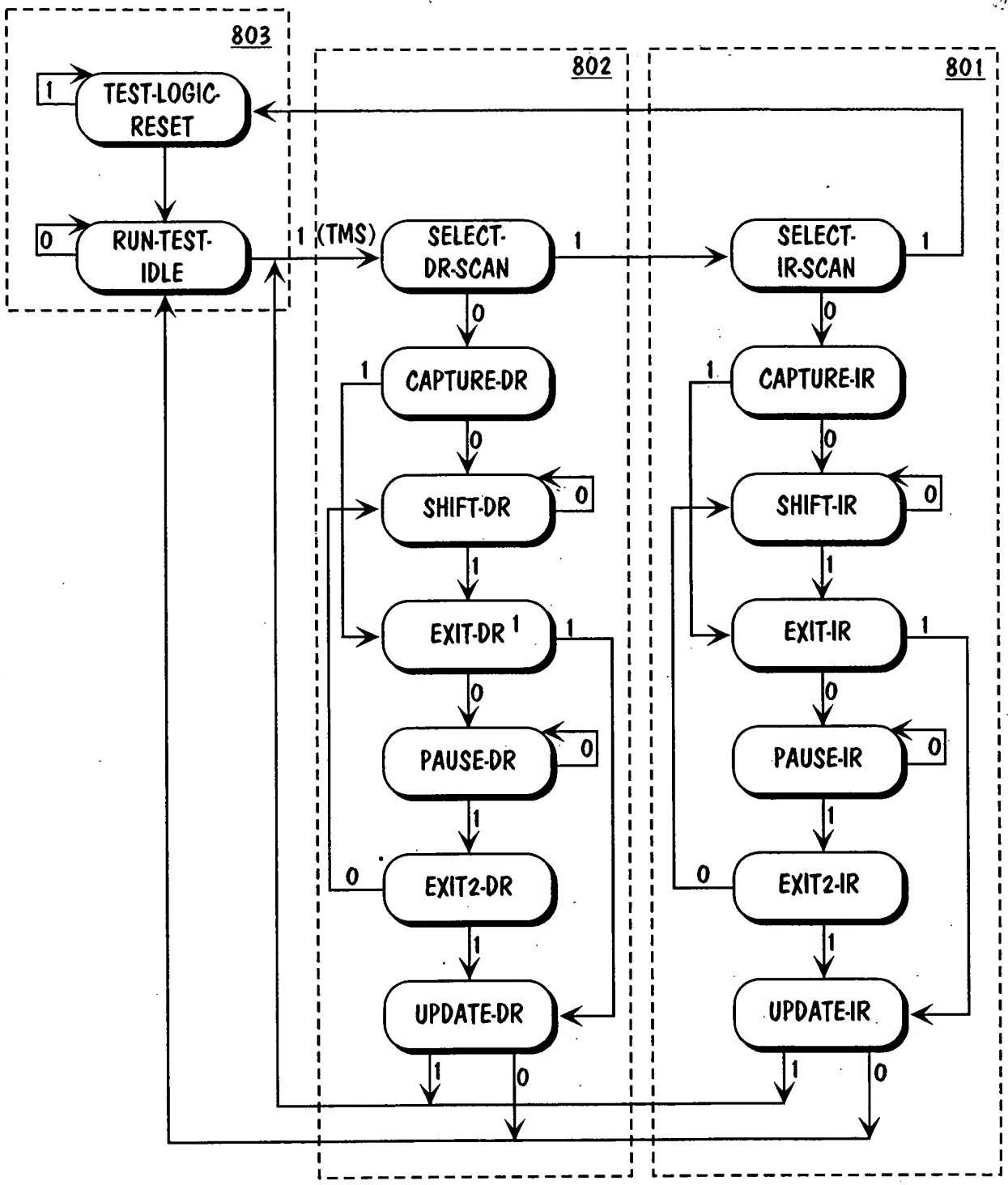
803
802
801
TEST-LOGIC-RESET
RUN-TEST-IDLE
(TMS)
SELECT-DR-SCAN
CAPTURE-DR
SHIFT-DR
EXIT-DR
PAUSE-DR
EXIT2-DR
UPDATE-DR
SELECT-IR-SCAN
CAPTURE-IR
SHIFT-IR
EXIT-IR
PAUSE-IR
EXIT2-IR
UPDATE-IR

FIG. 8

TD20HO" 9/99H/60

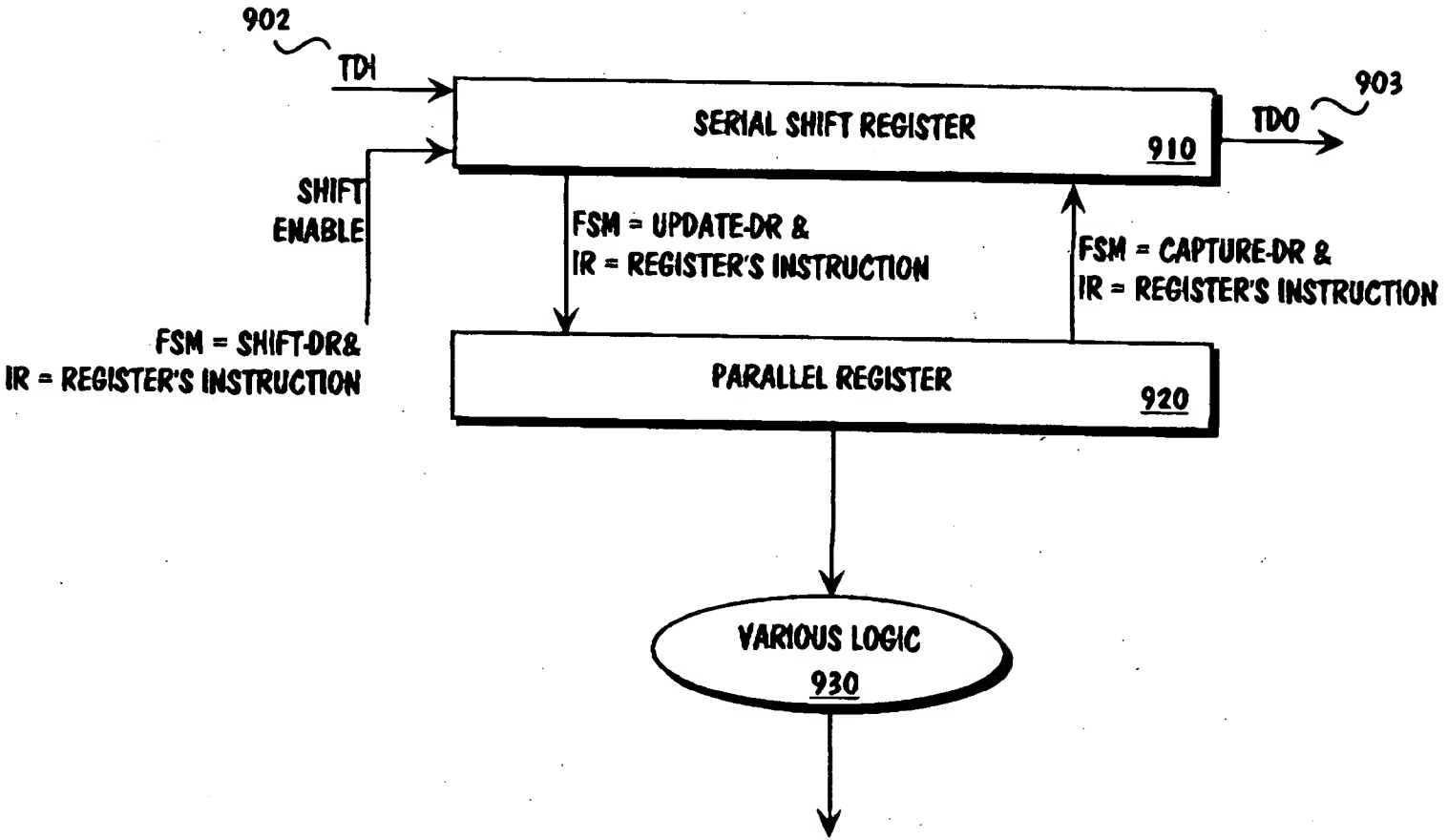

FIG. 9